

SECTION I:

INTRODUCTION

Hyde County Multi-Hazard Mitigation Plan Update 2008

Table of Contents

I.	Introduction	1
	A. Background	1
	B. Purpose.....	4
	C. Scope.....	4
	D. Authority.....	5
	E. Participants in the Planning Process	6
	F. Description of the Planning Process	7
II.	Community Goals	10
III.	Mitigation Strategy.....	11
	A. Mitigation Objectives.....	12
	B. Mitigation Actions	14
	• Prevention	
	• Property Protection	
	• Natural Resource Protection	
	• Structural Projects	
	• Emergency Services	
	• Public Information and Awareness	
IV.	Implementation.....	36
	A. Process	36
	B. Funding Sources	37
V.	Evaluation and Enhancement	
	A. Monitoring and Reporting.....	46
	B. Revisions and Updates	47

Hyde County Multi-Hazard Mitigation Plan Update 2008

Table of Contents

Appendices:

A.	Hazard Identification and Analysis	A-1
1.	Potential Hazards	A-2
1.A.	Flooding	A-2
1.B.	Hurricanes & Tropical Storms	A-4
1.C.	Tornadoes	A-16
1.D.	Nor'easters & Coastal Storms	A-20
1.E.	Severe Winter Storms	A-22
1.F.	Severe Thunderstorms	A-24
1.G.	Wildfires	A-25
1.H.	Earthquakes	A-27
2.	Hazard Profile Worksheet and Risk Index	A-32
3.	Conclusions on Hazard Risk.....	A-36
B.	Community Vulnerability Assessment	B-1
1.	Geographic Profile.....	B-2
2.	Demographic Profile	B-3
3.	Economic Profile	B-6
4.	Natural, Historical & Cultural Resources	B-9
5.	Hazard Prone Locations	B-12
6.	Repetitive Loss Inventory	B-13
7.	Critical Facilities	B-17
8.	Development Trends & Implications	B-19
9.	Community Vulnerability Maps	B-21
10.	Conclusions on Community Vulnerability.....	B-51
C.	Mitigation Capabilities Assessment.....	C-1
1.	Staff & Organizational Capability.....	C-2
2.	Technical Capability.....	C-4
3.	Fiscal Capability.....	C-5
4.	Policy & Program Capability.....	C-6
5.	Legal Authority.....	C-14
6.	Political Willpower.....	C-21
D.	Mitigation Action Plan (MAP)	D-1

I. Introduction

This section was reviewed and revised by the Hyde County Mitigation Advisory Committee and it was determined through formal review that the following sections needed to be revised: Section D. Authority, Section E. Participants in the Planning Process, and Section F. Description of the Planning Process. These revisions were the result of a checklist of new items that have been implemented along with a change in staff.

This section provides a general introduction to the Hyde County Hazard Mitigation Plan. It is broken down into the following six sections:

- A. Background*
- B. Purpose*
- C. Scope*
- D. Authority*
- E. Participants in the Planning Process*
- F. Description of the Planning Process*

A. BACKGROUND

Natural hazards, such as floods, tornadoes and hurricanes, are a part of the world around us. Their occurrence is natural and inevitable, and there is little we can do to control their force and intensity. However, through *hazard mitigation planning*, we can control what comes afterward. By minimizing the impact of natural hazards upon our built environment, we can prevent such events from resulting in disasters.

"Hazard mitigation" is simply a technical term for reducing risks to people and property from natural hazards. It includes both structural measures, such as protecting buildings and infrastructure from the forces of wind and water, and non-structural measures, such as natural resource protection and wise floodplain management. These activities can target existing development or seek to protect future development by avoiding any new hazardous construction. It is widely accepted that the most effective mitigation measures are implemented at the local government level, where decisions on the regulation and control of development are ultimately made.

The easiest way a community can get serious about hazard mitigation is through the development and adoption of a local **hazard mitigation plan**. A mitigation plan will ensure that measures to reduce the present and future vulnerability of a community are thoroughly considered before, during, and after the next disaster strikes.

Mitigation planning offers many benefits that include:

I. Introduction

- saving lives and property;
- saving money;
- speeding recovery following disasters;
- reducing future vulnerability through wise development / redevelopment;
- expediting both pre-disaster and post-disaster grant funding; and
- demonstrating a firm commitment to improving community health and safety.

Recently, both the State of North Carolina and the U.S. Congress made the development of a hazard mitigation plan a specific eligibility requirement for any local government applying for mitigation grant funding. Communities with an adopted plan will therefore become “pre-positioned” and more apt to receive any available mitigation funds.

More importantly, mitigation planning has the potential to produce long-term and recurring benefits by breaking the repetitive cycle of disaster loss. A core assumption of mitigation is that current dollars invested in mitigation practices will significantly reduce the demand for future dollars by lessening the amount needed for emergency recovery, repair and reconstruction. Further, these mitigation practices will enable local residents, businesses and industries to re-establish themselves in the wake of a disaster, getting the community economy back on track sooner and with less interruption.

Mitigation planning will also lead to benefits that go beyond solely reducing hazard vulnerability. Measures such as the acquisition or regulation of land in known hazard areas can help achieve multiple community goals, such as preserving open space, maintaining environmental health and natural features, and enhancing recreational opportunities.

Hyde County, with a population of 5,826 persons, is located in a region of North Carolina that is particularly vulnerable to the effects of a wide range of natural hazards. These hazards threaten the life and safety of County residents, and have the potential to damage or destroy both public and private property and disrupt the local economy and overall quality of life. The County government, its residents and businesses have in fact suffered disaster losses in years past that exceed millions of dollars and resulted in the loss of life.

Beginning in the mid-1990's, Hyde County established a firm commitment to reducing the potential for future disaster losses. Following a destructive series of hurricanes and coastal storms, Hyde County was awarded significant funding in order to mitigate both public and private property against future storm events. The County is now in the process of elevating or acquiring and replacing hundreds of flood-damaged or flood-prone structures. These mitigation projects have already proven themselves effective, and many Hyde County residents are now able to rest easy knowing that floodwaters will not again invade their homes.

I. Introduction

In an effort to sustain this local commitment to hazard mitigation, Hyde County has prepared the first version of a Hazard Mitigation Plan (2002) and is now reevaluating and updating a Hazard Mitigation Plan (2008). At its most inner core, the Plan recommends specific actions to combat the forces of nature and protect its residents from hazard losses. These actions go beyond simply recommending structural solutions to reduce existing vulnerability, such as elevation and acquisition projects. Local policies on community growth and development, incentives for natural resource protection, and public awareness and outreach activities are examples of other actions considered to reduce Hyde County's future vulnerability to natural hazards. The Plan has been designed to be a living document... with implementation and evaluation procedures included to help achieve meaningful objectives and successful outcomes.

The Hazard Mitigation Plan (2002) was developed under a Flood Mitigation Assistance (FMA) planning grant awarded to Hyde County by the North Carolina Department of Crime Control and Public Safety, Division of Emergency Management in August 2001.

I. Introduction

B. PURPOSE

The purpose of this Hazard Mitigation Plan is:

- To protect life, safety and property by reducing the potential for future damages and economic losses that result from natural hazards;
- To qualify for additional grant funding, in both the pre-disaster and post-disaster environment;
- To qualify for additional credit under the Community Rating System (CRS);
- To speed recovery and redevelopment following future disaster events;
- To demonstrate a firm local commitment to hazard mitigation principles; and
- To comply with both state and federal legislative requirements for local hazard mitigation plans.

C. SCOPE

This Hazard Mitigation Plan will be maintained to fully address the hazards determined to be “high risk” and “moderate risk.” Other hazards will be considered, but are not required to be fully addressed within this Plan.

The geographic scope for the Hazard Mitigation Plan includes all areas of Hyde County.

I. Introduction

D. AUTHORITY

This Hazard Mitigation Plan has been adopted by the Hyde County Board of Commissioners under the authority and police powers granted to counties in North Carolina General Statutes (N.C.G.S., Chapter 153A).

This Plan has been developed to be in accordance with current rules and regulations governing local hazard mitigation plans. The Plan shall be routinely monitored to maintain compliance with the following legislation:

- (1) North Carolina General Statutes, Chapter 166A: North Carolina Emergency Management Act as amended by Senate Bill 300: An Act to Amend the Laws Regarding Emergency Management as Recommended by the Legislative Disaster Response and Recovery Commission (2001).
- (2) The Robert T. Stafford Disaster Relief and Emergency Assistance Act as amended by the Disaster Mitigation Act of 2000 (Public Law 106-390 – October 30, 2000).

To Be Determined After Completion

I. Introduction

E. PARTICIPANTS IN THE PLANNING PROCESS

The participants in the development of this Hazard Mitigation included the following persons, who collectively serve to make up the *Hyde County Mitigation Advisory Committee*:

Mr. Jerry Hardison	<i>Hyde County Building Inspector</i>
Ms. Alice Keeney	<i>Hyde County Planner</i>
Ms. Jane Hodges	<i>Hyde County Housing & Mitigation Specialist</i>
Mr. Tony Spencer	<i>Hyde County Emergency Manager</i>
Mr. Mark Brown	<i>NCEM Area Coordinator</i>
Mr. Carl Classen	<i>Hyde County Manager</i>
Mr. Clint Berry	<i>Hyde County Water</i>
Mr. Mac Gibbs	<i>NCSU Cooperative Extension</i>
Ms. Kris Noble	<i>Hyde County Manager's Office; Facilitator for Plan Development and Committee Meetings</i>

I. Introduction

F. DESCRIPTION OF THE PLANNING PROCESS

Hyde County utilized the process recommended by the North Carolina Division of Emergency Management (NCEM) to develop the Hazard Mitigation Plan (2002) and also to complete this update. In short, the process included the following steps, listed in the order in which they were undertaken:

1. Hazard Identification and Analysis
2. Community Vulnerability Assessment
3. Mitigation Capabilities Assessment
4. Community Goals
5. Mitigation Strategy

The Mitigation Advisory Committee followed the FEMA Planning process outlined in the Local Hazard Mitigation Guidance (July 1, 2008). The committee reviewed each section of the existing plan based on the five step planning process to determine if the recommendations of that section had been implemented or not. If the committee determined a section needed to be revised it was highlighted and new information was included.

The criteria used to update and evaluate each section of the plan included consensus building by the committee; a review of existing mitigation actions to determine if they had been implemented; and an evaluation of existing and future land uses as it relates to the special flood hazard area in Hyde County; an analysis of existing ordinances and studies was conducted to determine the relationship with each section of the hazard mitigation plan.

The process used to review and analyze each section of the plan included the following:

- the planning committee reviewed each Step of the planning process in the plan and identified information that required deletion, deferment, or to remain unchanged; a majority vote of the committee was utilized to determine necessary changes regarding each step
- a review of existing mitigation actions to determine if they had been implemented
- an evaluation of existing and future land uses as it relates to the special flood hazard areas in Hyde County
- an analysis of existing ordinances and studies

Step 1, the *Hazard Identification and Analysis*, describes and analyzes the natural hazards present in Hyde County that can threaten human life and damage property. It includes historical data on past hazard occurrences, and establishes hazard profiles and a risk index based upon hazard frequency,

I. Introduction

magnitude and impact. The risk index forms the basic foundation for concentrating and prioritizing mitigation efforts.

The committee reviewed all the hazards identified in the existing plan to determine if each hazard poses a greater risk to Hyde County in 2009. Newly updated flood maps were evaluated and analyzed to identify the impact on existing and future development.

Step 2, the *Community Vulnerability Assessment*, was completed predominantly through investigative research along with the use of GIS technology and best available data. It includes narrative descriptions on community characteristics, such as Hyde County's geographical, economic and demographic profiles, and discusses future development trends and implications for hazard vulnerability. To graphically depict hazard vulnerability, this section also included 25 community vulnerability assessment maps.

The planning department director (mitigation team member) led the group in a discussion of the community vulnerability assessment and determined no changes were necessary.

Step 3, the *Mitigation Capabilities Assessment*, provides a comprehensive examination of Hyde County's capacity to implement meaningful mitigation strategies, and identifies existing opportunities for program enhancement. Capabilities addressed in this section include staff and organizational capability, technical capability, policy and program capability, fiscal capability, legal authority and political willpower. The purpose of this assessment is to identify any existing gaps, weaknesses or conflicts in local programs/activities that may hinder mitigation efforts, or to identify those local activities that can be built upon in establishing a successful community hazard mitigation program.

Through consensus the committee reviewed each mitigation action and strategy to determine which actions had been completed and which actions needed to be continued and assigned new completion dates to those actions. The committee also reviewed the actions in the NC State Hazard Mitigation Plan to determine if the actions in the mitigation strategy are consistent with the state plan.

Steps 1,2, and 3 are collectively referred to as *background studies*, and form the basis for designing the community's hazard mitigation strategy. These three studies have been included as appendices to the Hazard Mitigation Plan, for they are simply reference material and not considered "action" components of the Plan document.

The conclusion of these three background studies result in the formation of community goal statements (Step 4) and set the stage for developing, adopting

I. Introduction

and implementing a meaningful Hazard Mitigation Strategy (Step 5) for Hyde County.

The committee reviewed and analyzed the existing goals. Goal #2 was enhanced to establish an annual schedule to review and revise mitigation policies.

These two steps help make the Plan strategic and functional for implementation purposes, and ultimately are the “action” components of the plan. Following the completion of Step 5, Hyde County concentrated on designing measures to ensure the Plan’s ultimate implementation, and adopted evaluation and enhancement procedures to ensure the Plan is routinely updated.

Hyde County’s mitigation planning process was initiated in September 2001, when the county was awarded a Flood Mitigation Assistance (FMA) grant by NCEM. Shortly following the execution of the FMA Grant Agreement (#FMA-PL-00-03), Hyde County negotiated a subcontract with PBS&J consultants to facilitate their mitigation planning efforts and complete the first version of the Hyde County Hazard Mitigation Plan.

In March 2008 the process of updating the Hyde Hazard Mitigation Plan began. The planning committee was formed as detailed on page 7 of this section. The first of a series of two Public Hearings was held on April 7, 2008 at the Government Center in Swan Quarter. There were no public comments from the 14 participants after the presentation of the Hazard Mitigation Plan by Kris Noble. This Public Hearing was advertised in both regional newspapers including the Coastland Times and Washington Daily News. These publications are distributed not only throughout the County but also to neighboring counties. Affidavits of publication are available. It was also advertised on the county website, sent via email to the County Manager’s Public Notice distribution list and displayed with all Public Notices at the Hyde Government Center.

Immediately following the first Public Input Hearing the committee met and began the tasks of identifying hazards, accessing risks and accessing vulnerabilities. The committee used the FEMA State and Local Mitigation Planning How-To Guide Modules to facilitate this process including, but not limited to, *“Developing the Mitigation Plan: Identifying mitigation actions and implementation strategies, Understanding Your Risks: identifying hazards and estimating losses, Getting Started: building support for mitigation planning”*. The committee also used the worksheets contained in these modules to facilitate the planning process.

This committee met on a biweekly basis. Various directional meetings were held between the facilitator and Emergency Manager in between meetings. Existing plans, studies, reports, and technical information was referred to by committee members including but not limited to the Hyde Emergency Operations Plan, Hyde

I. Introduction

Land Use Plan, Hyde Subdivision Ordinance and the Economic Development Intelligence System. The Economic Development Intelligence System (EDIS) is a one-of-a-kind technology that goes beyond traditional data and GIS mapping systems to provide vital demographic and economic data for user defined geographic areas.

The second Public Hearing to gather public input was held on May 19, 2008 at the Community Center on Ocracoke Island. There were no public comments from the 12 participants after the presentation of the Hazard Mitigation Plan by Kris Noble. This Public Hearing was advertised in both regional newspapers including the Coastland Times and Washington Daily News. Affidavits of publication are available. It was also advertised on the county website, sent via email to the County Manager's Public Notice distribution list and displayed with all Public Notices at the Hyde Government Center.

The third Public Hearing will be held on October 19, 2009. A Public Notice was advertised on the county website and in the Coastland Times. The Public Hearing will be held in the Hyde County Government Center and will be for the approval of the final plan submitted to FEMA. After approval from the Board of Commissioners and FEMA, then plan will then be adopted by the Board of Commissioners within a timely manner, but within the required one year period.

The Hazard Mitigation Plan update is consistent with all other Hyde County plans, studies, ordinances, and documents.

SECTION II:

COMMUNITY GOALS

II. Community Goals

INTRODUCTION

This portion of the Plan identifies the four (4) goal statements established by Hyde County for purposes of this Hazard Mitigation Plan. Each Goal is meant to be general and broad in nature, and can only be achieved through the long-term implementation of more specific objectives. It is intended that each Goal listed below will be more specifically addressed and realized through the implementation of short-term mitigation objectives and actions established and maintained in *Section III: Mitigation Strategy*.

GOAL #1

*Continue to increase Hyde County's **internal capabilities** to mitigate the effects of natural hazards.*

GOAL #2

*Enhance existing or design new County **policies** that will reduce the potential damaging effects of hazards without hindering other community goals and establish an annual schedule to review and revise these policies.*

GOAL #3

*Protect Hyde County's most vulnerable populations, buildings and critical facilities through the implementation of cost-effective and technically feasible **mitigation projects**.*

GOAL #4

*Protect public health, safety and welfare by continuing to increase the public **awareness** of existing hazards and by fostering both individual and public **responsibility** in mitigating risks due to those hazards.*